

Hollow Chisel Mortiser

(Model 14-651)



PART NO. 910209 - 02-21-03
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ESPAÑOL: PÁGINA 17

SAFETY GUIDELINES - DEFINITIONS

This manual contains information that is important for you to know and understand. This information relates to protecting YOUR SAFETY and PREVENTING EQUIPMENT PROBLEMS. To help you recognize this information, we use the symbols to the right. Please read the manual and pay attention to these sections.

▲ DANGER Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

▲ WARNING Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

▲ CAUTION Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

CAUTION Used without the safety alert symbol indicates potentially hazardous situation which, if not avoided, may result in property damage.

▲ WARNING **SOME DUST CREATED BY POWER SANDING, SAWING, GRINDING, DRILLING, AND OTHER CONSTRUCTION ACTIVITIES** contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and
- arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, always wear **MSHA/NIOSH** approved, properly fitting face mask or respirator when using such tools.

GENERAL SAFETY RULES



▲ WARNING **READ AND UNDERSTAND ALL WARNINGS AND OPERATING INSTRUCTIONS BEFORE USING THIS EQUIPMENT.** Failure to follow all instructions listed below, may result in electric shock, fire, and/or serious personal injury or property damage.

SAVE! IMPORTANT SAFETY INSTRUCTIONS SAVE!

Woodworking can be dangerous if safe and proper operating procedures are not followed. As with all machinery, there are certain hazards involved with the operation of the product. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result. Safety equipment such as guards, push sticks, hold-downs, featherboards, goggles, dust masks and hearing protection can reduce your potential for injury. But even the best guard won't make up for poor judgment, carelessness or inattention. Always use common sense and exercise caution in the workshop. If a procedure feels dangerous, don't try it. Figure out an alternative procedure that feels safer. **REMEMBER:** Your personal safety is your responsibility.

This machine was designed for certain applications only. Delta Machinery strongly recommends that this machine not be modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, **DO NOT** use the machine until you have first contacted Delta to determine if it can or should be performed on the product.

Technical Service Manager

Delta Machinery

4825 Highway 45 North

Jackson, TN 38305

(IN CANADA: 505 SOUTHGATE DRIVE, GUELPH, ONTARIO N1H 6M7)

1. FOR YOUR OWN SAFETY, READ INSTRUCTION MANUAL BEFORE OPERATING THE TOOL. Learn the tool's application and limitations as well as the specific hazards peculiar to it.

2. KEEP GUARDS IN PLACE and in working order.

3. ALWAYS WEAR EYE PROTECTION. Wear safety glasses. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses. Also use face or dust mask if cutting operation is dusty. These safety glasses must conform to ANSI Z87.1 requirements. **NOTE:** Approved glasses have Z87 printed or stamped on them.

4. REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it "on".

5. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.

6. DON'T USE IN DANGEROUS ENVIRONMENT. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well-lighted.

7. KEEP CHILDREN AND VISITORS AWAY. All children and visitors should be kept a safe distance from work area.

8. MAKE WORKSHOP CHILDPROOF – with padlocks, master switches, or by removing starter keys.

9. DON'T FORCE TOOL. It will do the job better and be safer at the rate for which it was designed.

10. USE RIGHT TOOL. Don't force tool or attachment to do a job for which it was not designed.

11. WEAR PROPER APPAREL. No loose clothing, gloves, neckties, rings, bracelets, or other jewelry to get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.

12. SECURE WORK. Use clamps or a vise to hold work when practical. It's safer than using your hand and frees both hands to operate tool.

13. DON'T OVERREACH. Keep proper footing and balance at all times.

14. MAINTAIN TOOLS IN TOP CONDITION. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

15. DISCONNECT TOOLS before servicing and when changing accessories such as blades, bits, cutters, etc.

16. **USE RECOMMENDED ACCESSORIES.** The use of accessories and attachments not recommended by Delta may cause hazards or risk of injury to persons.

17. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure switch is in “OFF” position before plugging in power cord. In the event of a power failure, move switch to the “OFF” position.

18. **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.

19. **CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to ensure that it will operate properly and perform its intended function – check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.

20. **DIRECTION OF FEED.** Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.

21. **NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.** Don't leave tool until it comes to a complete stop.

22. **STAY ALERT, WATCH WHAT YOU ARE DOING, AND USE COMMON SENSE WHEN OPERATING A POWER TOOL. DO NOT USE TOOL WHILE TIRED OR UNDER THE INFLUENCE OF DRUGS, ALCOHOL, OR MEDICATION.** A moment of inattention while operating power tools may result in serious personal injury.

23. **MAKE SURE TOOL IS DISCONNECTED FROM POWER SUPPLY** while motor is being mounted, connected or reconnected.

24. **THE DUST GENERATED** by certain woods and wood products can be injurious to your health. Always operate machinery in well ventilated areas and provide for proper dust removal. Use wood dust collection systems whenever possible.

ADDITIONAL SAFETY RULES FOR HOLLOW CHISEL MORTISERS

⚠ WARNING FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY.

1. **DO NOT OPERATE THIS MACHINE** until it is **assembled** and **installed** according to the instructions.

2. **OBTAIN ADVICE FROM YOUR SUPERVISOR, instructor, or another qualified person** if you are not familiar with the operation of this machine.

3. **FOLLOW ALL WIRING CODES** and recommended electrical connections.

4. **NEVER** turn the machine “ON” before clearing the table of all objects (tools, scrap pieces, etc.).

5. **ALWAYS** keep hands, fingers and hair away from the rotating bit.

6. **DO NOT** attempt to mortise material that does not have a flat surface, unless a suitable support is used.

7. **ALWAYS** position holddown directly over workpiece to prevent workpiece from lifting during operation.

8. **ALWAYS** support workpiece securely against fence to prevent rotation.

9. **BE SURE** drill bit is sharp, not damaged, and properly secured in the chuck before operation.

10. **NEVER** turn on the power with the drill bit or chisel contacting the workpiece.

11. **NEVER** perform layout, assembly, or set-up work on the table while the machine is operating.

12. **ADJUST** the depth stop to avoid drilling into the table.

13. **ALWAYS** turn off the power before removing scrap pieces from the table.

14. **SHUT-OFF** the power, remove the drill bit and chisel, and clean the table before leaving the machine.

15. **FOR YOUR OWN SAFETY** – Don't wear gloves when operating the machine.

16. **TURN THE MACHINE “OFF”**, disconnect the machine from the power source, and clean the table/work area before leaving the machine. **LOCK THE SWITCH IN THE “OFF” POSITION** to prevent unauthorized use.

17. **ADDITIONAL INFORMATION** regarding the safe and proper operation of this tool is available from the Power Tool Institute, 1300 Summer Avenue, Cleveland, OH 44115-2851. Information is also available from the National Safety Council, 1121 Spring Lake Drive, Itasca, IL 60143-3201. Please refer to the American National Standards Institute ANSI 01.1 Safety Requirements for Woodworking Machines and the U.S. Department of Labor OSHA 1910.213 Regulations.

SAVE THESE INSTRUCTIONS.
Refer to them often
and use them to instruct others.

POWER CONNECTIONS

A separate electrical circuit should be used for your machines. This circuit should not be less than #12 wire and should be protected with a 20 Amp time lag fuse. If an extension cord is used, use only 3-wire extension cords which have 3-prong grounding type plugs and matching receptacle which will accept the machine's plug. Before connecting the machine to the power line, make sure the switch is in the "OFF" position and be sure that the electric current is of the same characteristics as indicated on the machine. All line connections should make good contact. Running on low voltage will damage the machine.

⚠ DANGER DO NOT EXPOSE THE MACHINE TO RAIN OR OPERATE THE MACHINE IN DAMP LOCATIONS.

MOTOR SPECIFICATIONS

Your machine is wired for 120 volt, 60 HZ alternating current. Before connecting the machine to the power source, make sure the switch is in the "OFF" position.

GROUNDING INSTRUCTIONS

⚠ DANGER THIS MACHINE MUST BE GROUNDED WHILE IN USE TO PROTECT THE OPERATOR FROM ELECTRIC SHOCK.

1. All grounded, cord-connected machines:

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This machine is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided - if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the machine is properly grounded.

Use only 3-wire extension cords that have 3-prong grounding type plugs and matching 3-conductor receptacles that accept the machine's plug, as shown in Fig. A.

Repair or replace damaged or worn cord immediately.

2. Grounded, cord-connected machines intended for use on a supply circuit having a nominal rating less than 150 volts:

If the machine is intended for use on a circuit that has an outlet that looks like the one illustrated in Fig. A, the machine will have a grounding plug that looks like the plug illustrated in Fig. A. A temporary adapter, which looks like the adapter illustrated in Fig. B, may be used to connect this plug to a matching 2-conductor receptacle as shown in Fig. B if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. The green-colored rigid ear, lug, and the like, extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box. Whenever the adapter is used, it must be held in place with a metal screw.

NOTE: In Canada, the use of a temporary adapter is not permitted by the Canadian Electric Code.

⚠ DANGER IN ALL CASES, MAKE CERTAIN THE RECEPTACLE IN QUESTION IS PROPERLY GROUNDED. IF YOU ARE NOT SURE HAVE A QUALIFIED ELECTRICIAN CHECK THE RECEPTACLE.

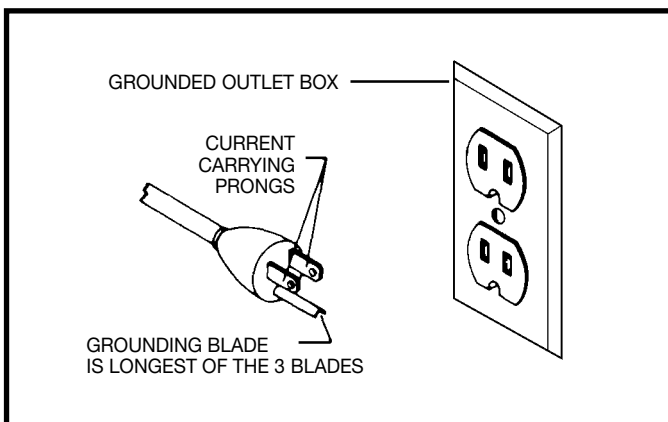


Fig. A

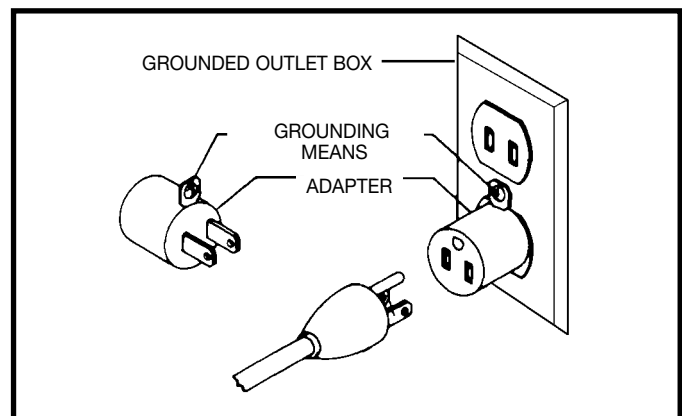


Fig. B

EXTENSION CORDS

CAUTION Use proper extension cords. Make sure your extension cord is in good condition and is a 3-wire extension cord which has a 3-prong grounding type plug and matching receptacle which will accept the machine's plug. When using an extension cord, be sure to use one heavy enough to carry the current of the machine. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating. Fig. D, shows the correct gauge to use depending on the cord length. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

MINIMUM GAUGE EXTENSION CORD			
RECOMMENDED SIZES FOR USE WITH STATIONARY ELECTRIC MACHINES			
Ampere Rating	Volts	Total Length of Cord in Feet	Gauge of Extension Cord
0-6	120	up to 25	18 AWG
0-6	120	25-50	16 AWG
0-6	120	50-100	16 AWG
0-6	120	100-150	14 AWG
6-10	120	up to 25	18 AWG
6-10	120	25-50	16 AWG
6-10	120	50-100	14 AWG
6-10	120	100-150	12 AWG
10-12	120	up to 25	16 AWG
10-12	120	25-50	16 AWG
10-12	120	50-100	14 AWG
10-12	120	100-150	12 AWG
12-16	120	up to 25	14 AWG
12-16	120	25-50	12 AWG
12-16	120	GREATER THAN 50 FEET NOT RECOMMENDED	

Fig. D

OPERATING INSTRUCTIONS

FOREWORD

Delta Model 14-651 is easier to operate than a conventional drill press equipped with a mortising attachment. The model 14-651 is made of cast-iron and steel for rigidity and stability. The mortiser comes with a standard 3-jaw type chuck for positive gripping of mortising bits.

UNPACKING AND CLEANING

Carefully unpack the machine and all loose items from the shipping container(s). Remove the protective coating from all unpainted surfaces. This coating may be removed with a soft cloth moistened with kerosene (do not use acetone, gasoline or lacquer thinner for this purpose). After cleaning, cover the unpainted surfaces with a good quality household floor paste wax.

NOTICE: THE MANUAL COVER PHOTO ILLUSTRATES THE CURRENT PRODUCTION MODEL. ALL OTHER ILLUSTRATIONS ARE REPRESENTATIVE ONLY AND MAY NOT DEPICT THE ACTUAL COLOR, LABELING OR ACCESSORIES AND MAY BE INTENDED TO ILLUSTRATE TECHNIQUE ONLY.

HOLLOW CHISEL MORTISER PARTS

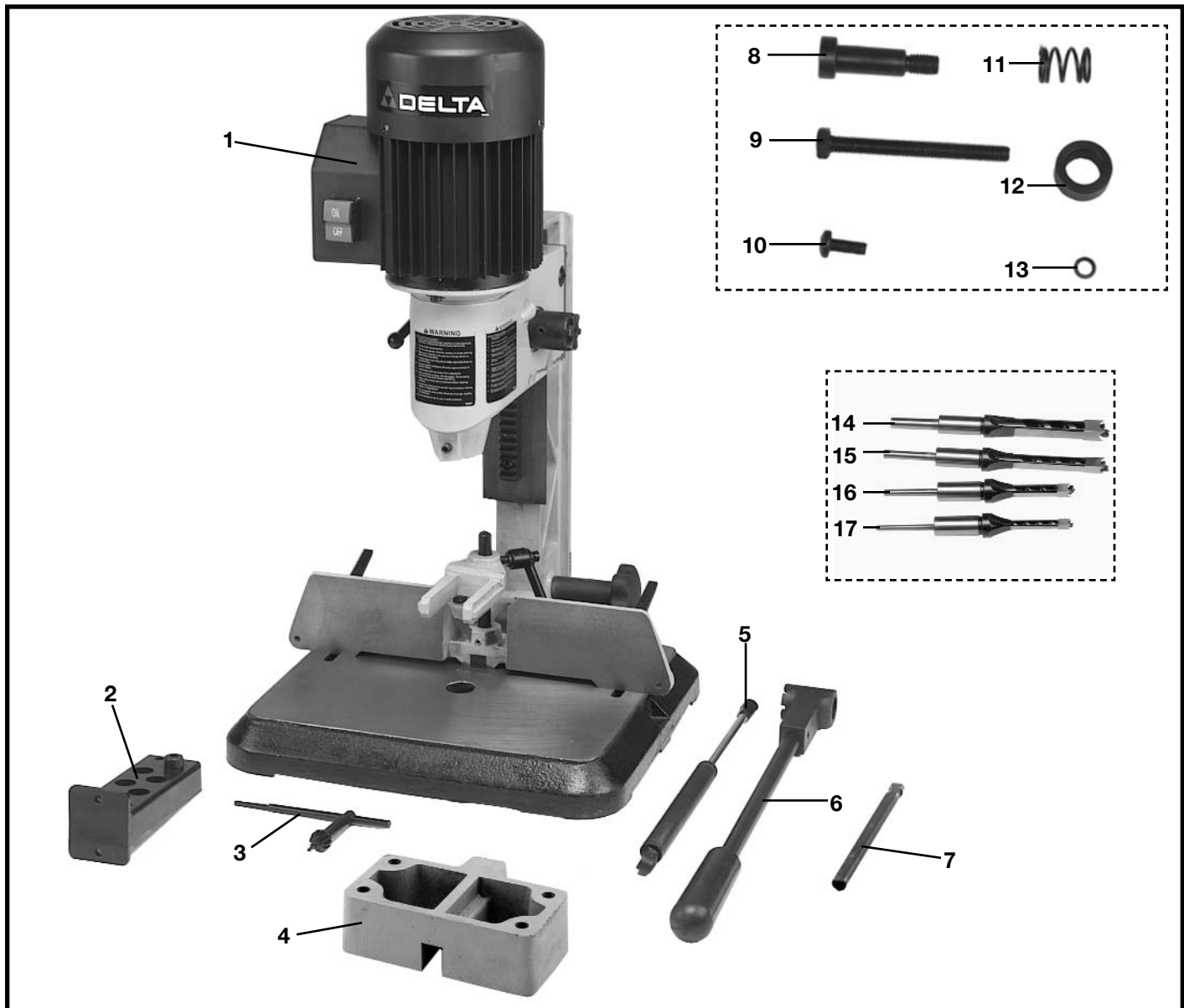


Fig. 2

- | | |
|--|---|
| 1. Mortising Machine | 10. M6x1x25mm Pan Head Screws (2) (for assembling tool and chisel holder) |
| 2. Tool and Chisel Holder | 11. Spring |
| 3. Chuck Key / Wrench | 12. Bushing (for use with extra long chisels) |
| 4. Column Extension | 13. M6 Lockwashers (2) (for assembling tool and chisel holder) |
| 5. Hydraulic Cylinder | 14. 1/2" Mortising Chisel and Bit |
| 6. Handle | 15. 3/8" Mortising Chisel and Bit |
| 7. Extended Hold down rod (use with column extension) | 16. 5/16" Mortising Chisel and Bit |
| 8. Special Screw (for raising and lowering handle) | 17. 1/4" Mortising Chisel and Bit |
| 9. M8x1.25x80mm Head Screw (4) (for assembling column extension to base) | |

ASSEMBLY

⚠ WARNING FOR YOUR OWN SAFETY, DO NOT CONNECT THE MACHINE TO THE POWER SOURCE UNTIL THE MACHINE IS COMPLETELY ASSEMBLED AND YOU READ AND UNDERSTAND THE ENTIRE INSTRUCTION MANUAL.

RAISING AND LOWERING HANDLE

1. Assemble hub of handle assembly (A) Fig. 3, to end of pinion shaft (B) and fasten handle to pinion shaft using special screw (C) and spring (D).

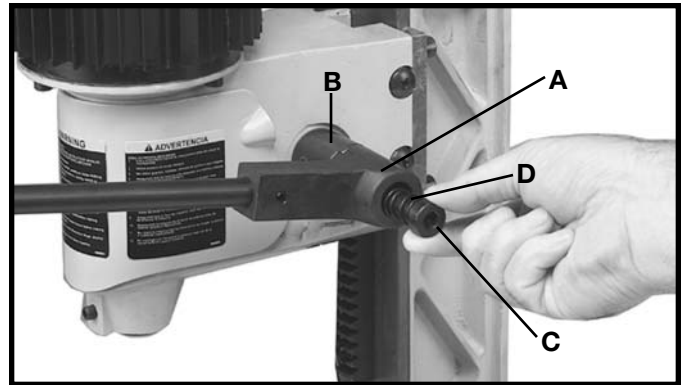


Fig. 3

2. Raise mortising machine head (E) Fig. 4, to the up position by turning handle (A) clockwise. **NOTE:** Handle (A) is spring-loaded and can be repositioned by pulling out handle and repositioning it on pinion shaft (B).

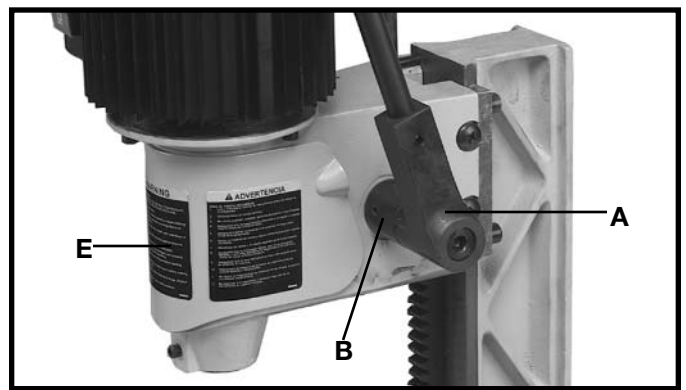


Fig. 4

HYDRAULIC CYLINDER

Make sure head (A) Fig. 5, is held in the up position and assemble the hydraulic cylinder (B) to the two fittings, one located on the back of the head (C) Fig. 5, and the other on the column (D) Fig. 6. Push each end of the hydraulic cylinder onto each fitting to hold the cylinder in place.

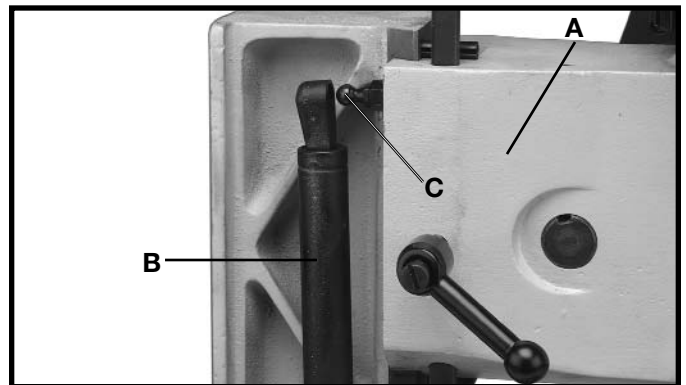


Fig. 5

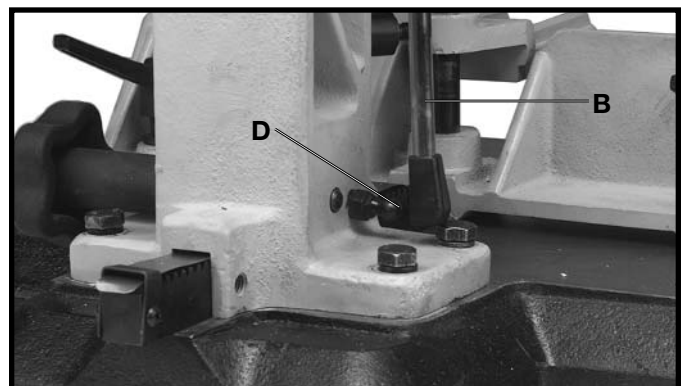


Fig. 6

TOOL AND CHISEL HOLDER

1. Assemble tool and chisel holder (A) Fig. 7, to back of column using the two M6x1x25mm screws (B) and M6 lockwashers as shown.

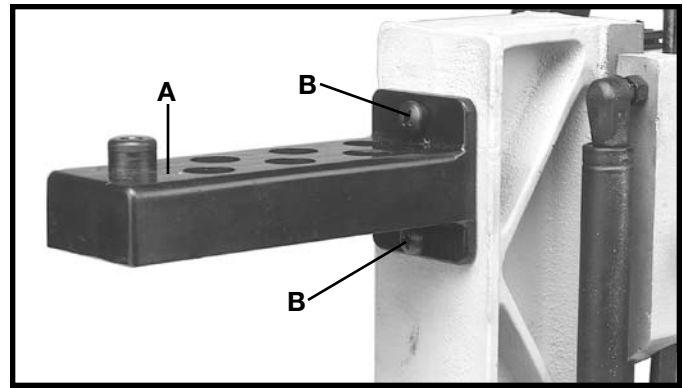


Fig. 7

2. Fig. 8, illustrates the chuck key/wrench (C), bushing (F) for use with extra long chisels, and chisels and bits (E) in holes of tool and chisel holder (A) when not in use.

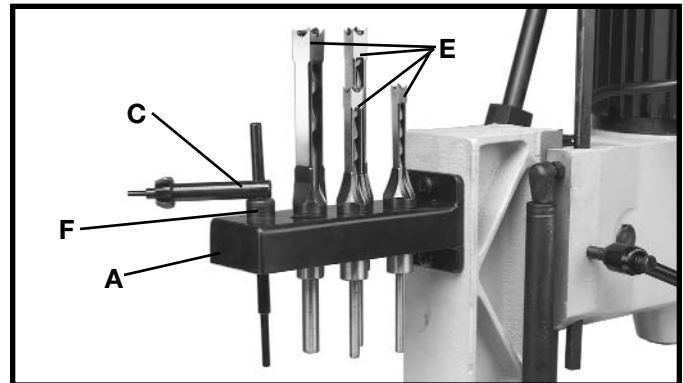


Fig. 8

FASTENING MACHINE TO SUPPORTING SURFACE

If during operation there is any tendency for the mortiser to tip over, slide or walk on the supporting surface, the base must be secured to the supporting surface with fasteners (not supplied), through the two holes (A) Fig. 9, located in the mortiser base.

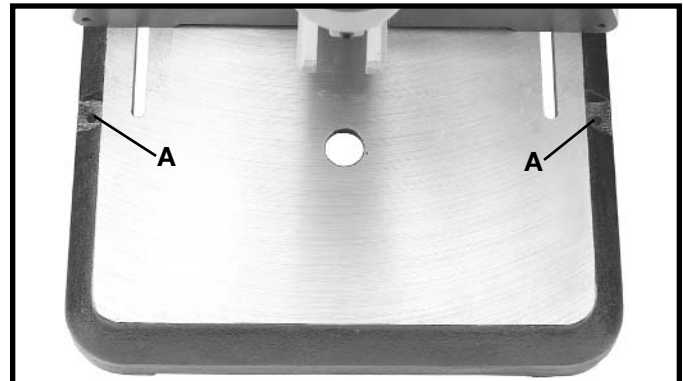


Fig. 9

ASSEMBLING CHISEL AND BIT

⚠ WARNING DISCONNECT MACHINE FROM POWER SOURCE.

1. Insert bit (A) Fig. 10, into chisel (B). **NOTE:** The opening (C) on the side of the chisel should always be to the right or left, never to the front or rear. The opening allows chips to escape during operation.

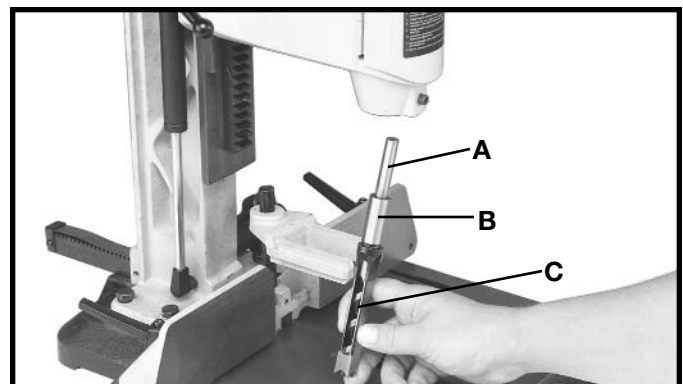


Fig. 10

2. Loosen screw (D) Fig. 11, and push chisel (B) up through hole in head as far as possible. Then lower chisel (B) 1/16" to 3/16" and tighten set screw (D). **IMPORTANT:** When inserting chisel (B) Fig. 12 into head, there must be a space of 1/16" to 3/16" clearance (F) between the bushing (E) and shoulder of chisel (B) as shown. This assures having proper clearance between the cutting lips of the bit and points of the chisel after the bit is inserted into the chuck.

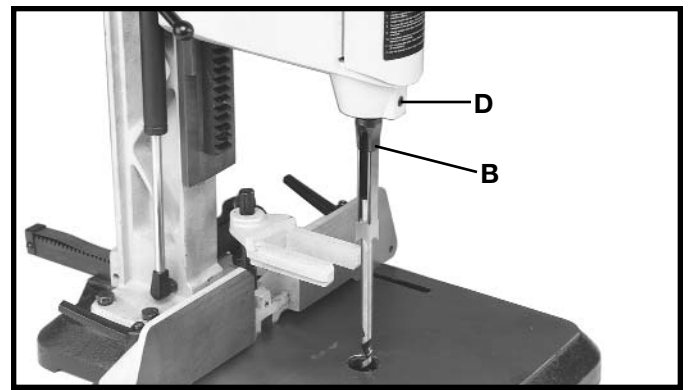


Fig. 11

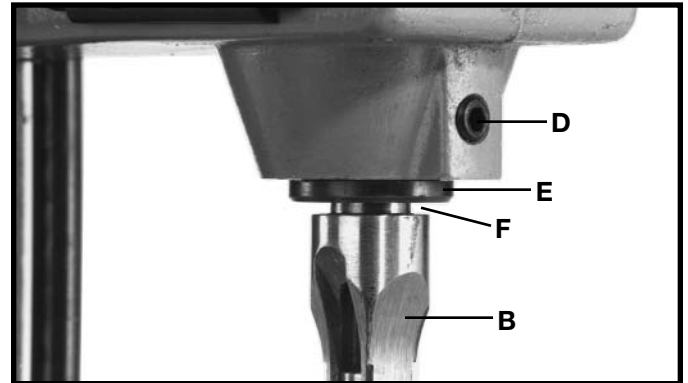


Fig. 12

3. Push bit (A) Fig. 13, up through chisel and into chuck (G) as far as it will go, and lock bit in chuck using chuck key supplied.

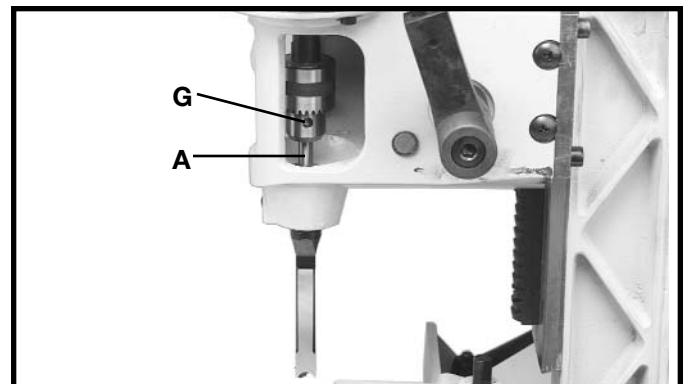


Fig. 13

4. Loosen set screw (D) Fig. 14, and push chisel (B) up against bottom of bushing (E), as shown, and tighten set screw (D). This should provide the proper distance between the cutting lips of the bit and the points of the chisel.

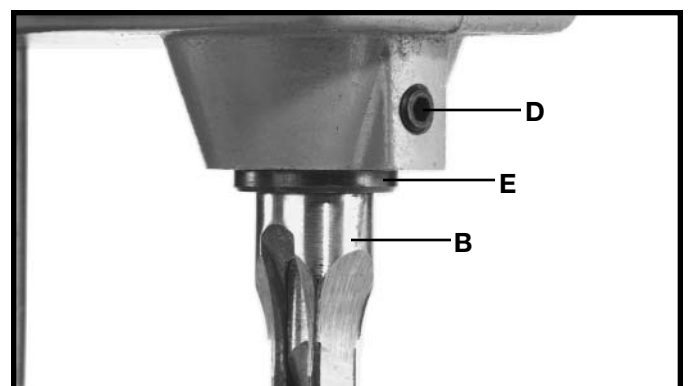


Fig. 14

5. The flat portion of the bit should be adjusted to a minimum of 1/16" below the bottom of the chisel, as shown in Fig. 15. For certain types of wood it may be necessary to increase this distance up to a maximum of 3/16" clearance. This method assures having proper clearance between the cutting edges of the bit and the points of the chisel.

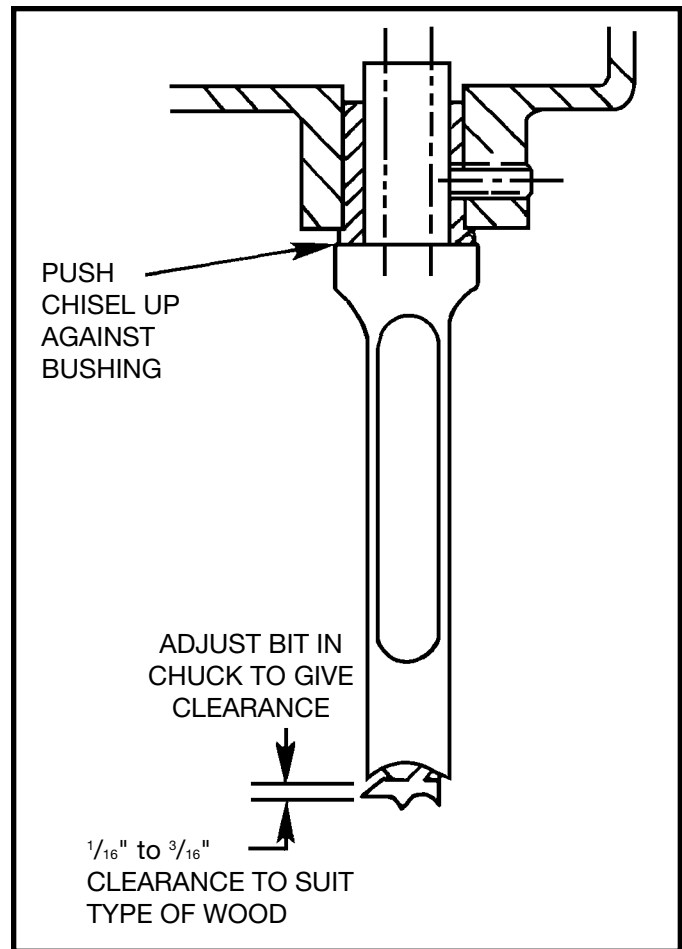


Fig. 15

ASSEMBLING COLUMN EXTENSION

The column can be extended for the purpose of mortising taller work pieces. To extend the column proceed as follows.

⚠ WARNING **DISCONNECT MACHINE FROM POWER SOURCE.**

1. Remove the two screws (B) Fig. 16, from the rack cover bracket and remove the rack cover bracket (D).
2. Remove the four screws and flat washers (A) Fig. 16.
3. Rotate handle (E) until the column assembly (C) Fig. 16, moves off the back of the rack and base.
4. Place the column extension (A) Fig. 17, on top of the rack (B). Align the four holes in the column extension (A) Fig. 17, with the four holes in the base (C).

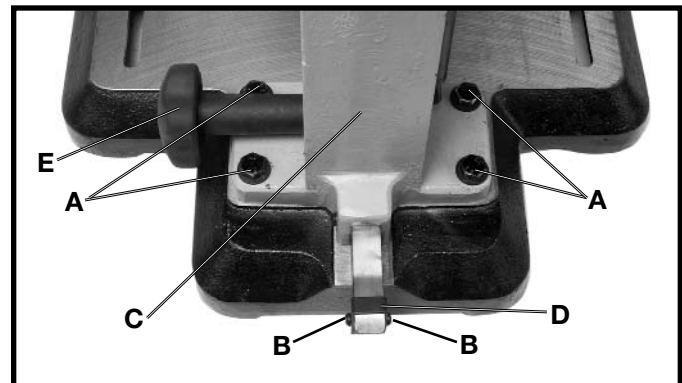


Fig. 16

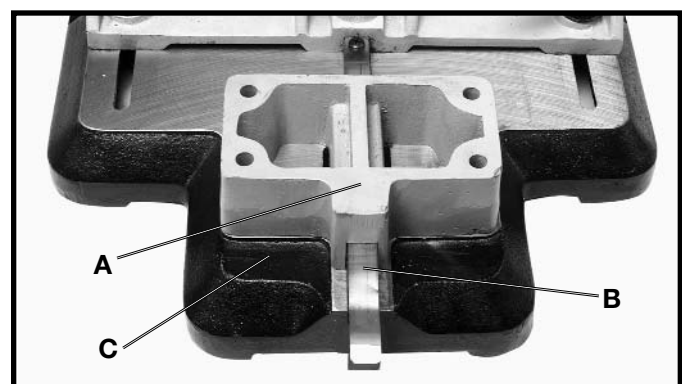


Fig. 17

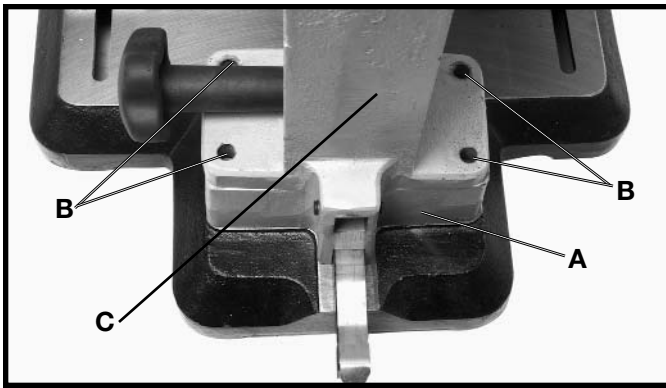


Fig. 18

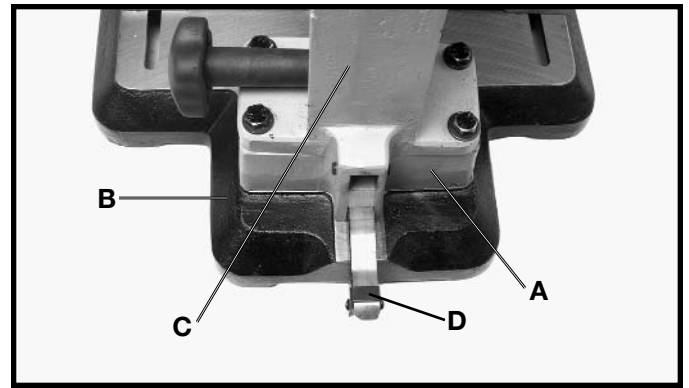


Fig. 19

5. Place the column assembly (C) Fig. 18, on top of the column extension (A) and align the four holes (B) in the column assembly with the four holes in the column extension (A).
6. Place a flat washer that was removed in **STEP 2**, on an M8x1.25x80mm hex head screw.
7. Insert the screw through the hole in the column assembly (C) Fig. 19, column extension (A), and thread into base (B). Repeat this process for the three remaining holes.
8. Replace the rack cover bracket (D) Fig. 19, that was removed in **STEP 1**.
9. Loosen the holddown knob (B) Fig. 19A and remove the hold down. Loosen set screw (C) and removed holddown rod (A) and replace with the extended hold down rod. Tighten set screw (C). Place the hold down (B) on the hold down rod and tighten hold down handle (B).

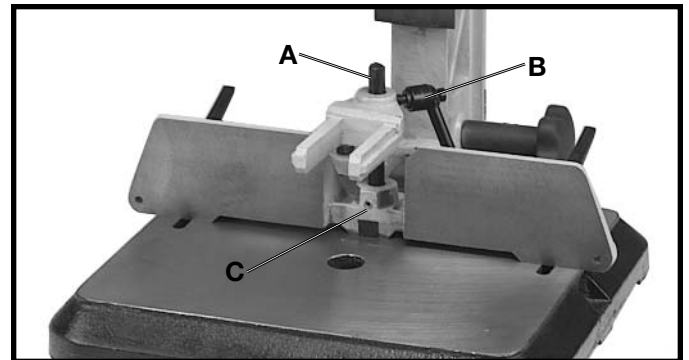


Fig. 19A

NOTE: REVERSE THE PREVIOUS PROCEDURE ("ASSEMBLING COLUMN EXTENSION") TO REMOVE THE COLUMN EXTENSION.

OPERATING CONTROLS AND ADJUSTMENTS

STARTING AND STOPPING MORTISER

The power switch is located on the left side of the mortiser. To turn the mortiser "ON", press the green start button (A) Fig. 20. To stop the mortiser, push the red button (B).



Fig. 20

LOCKING SWITCH IN THE "OFF" POSITION

When the tool is not in use, the switch should be locked in the "OFF" position to prevent unauthorized use. This can be done by inserting the lockout pin (C) Fig. 21, Delta accessory model number 50-164, through the hole in the start button (A). Place the 1/8" shank of a lock through the hole in the lockout pin and secure the lock as shown.



Fig. 21

DEPTH STOP ROD

A depth stop rod (A) Fig. 23, is provided to limit the depth of the chisel. To adjust the depth stop rod (A), loosen lever (C) and lower head until the chisel is at the desired depth. Lower depth stop rod (A) until it contacts the top of the column (D) and tighten lever (C).

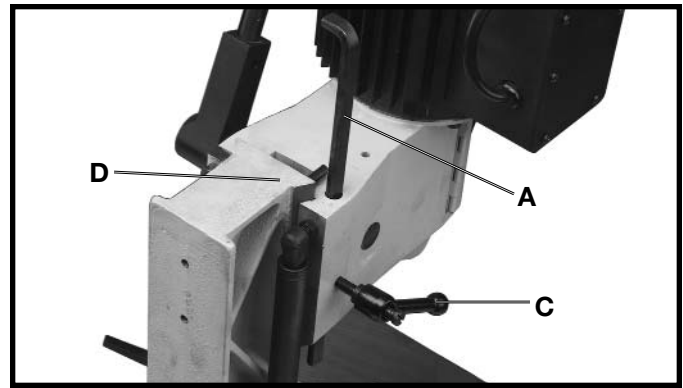


Fig. 23

FENCE

The fence (A) Fig. 24, can be moved in or out by loosening lock handles (B), and rotate the fence rack handle (C) to move the fence to the desired position and tightening handles (B). **NOTE:** Levers (B) are spring-loaded and can be repositioned by pulling out on the lever and repositioning it on the serrated nut located underneath the lever.

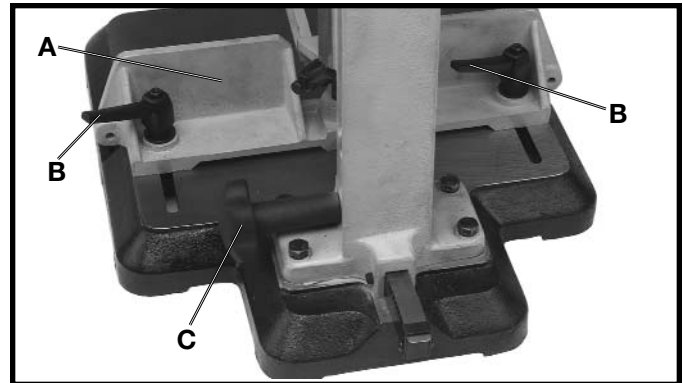


Fig. 24

HOLDDOWN

The purpose of the holddown (C) Fig. 25, is to prevent the workpiece (E) from lifting as the chisel is raised up, out of the hole. The holddown (C) should be adjusted so it just touches the top of the workpiece (E) and allows the workpiece to slide left or right. The holddown (C) can be turned upside down to accommodate thicker workpieces. To adjust the holddown (C), loosen handle (F), position holddown, and tighten handle (F).

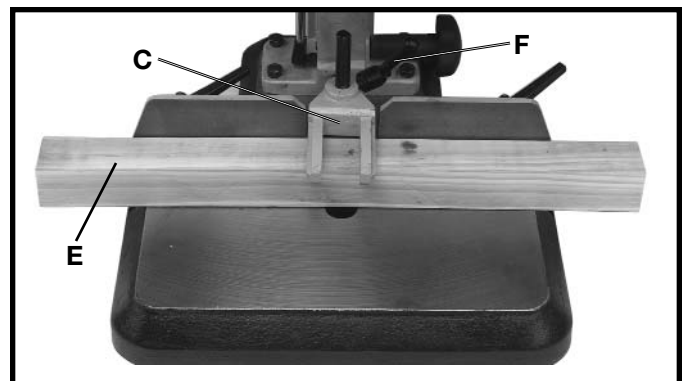


Fig. 25

CHISEL PARALLEL TO WORKPIECE

The chisel (A) Fig. 26, can be adjusted parallel to the workpiece by loosening screw (B) and rotating chisel until the back surface of the chisel is touching workpiece. Then tighten screw (B).

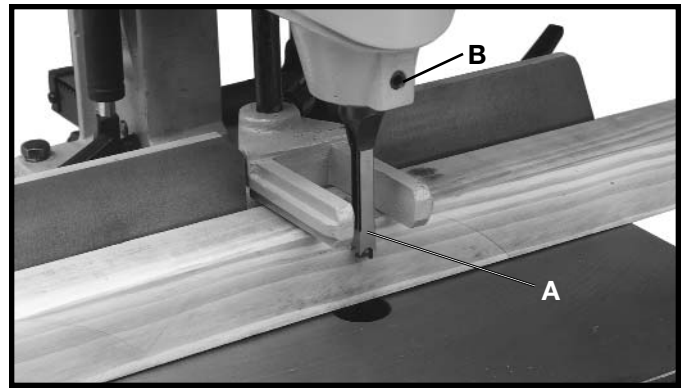


Fig. 26

SLIDING FIT BETWEEN HEAD AND COLUMN

A dovetail gib (A) Fig. 27, is provided on the rear of the head to insure a good sliding fit between the head and the column when the head is raised and lowered. Adjustment is made by loosening the two screws (B) and turning adjusting screws (C). Then tighten two screws (B). **NOTE:** Correct adjustment is when a good snug sliding fit is obtained without any side movement between the gib and the column. This adjustment should not be too tight that it restricts the sliding movement or too loose that it affects accuracy.

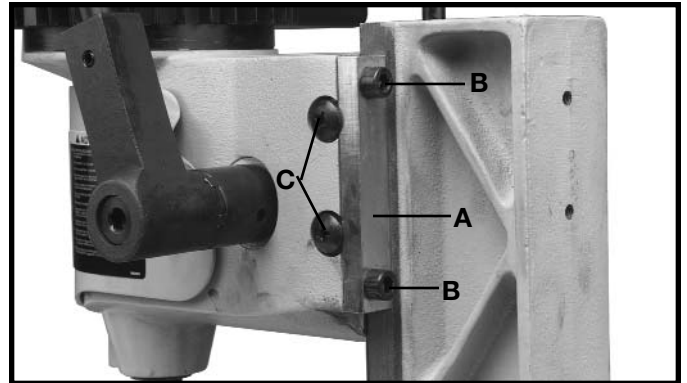


Fig. 27

OPERATIONS

1. Make sure that chisels and bits are sharp.
2. Fig. 28, illustrates a typical mortising operation. Note that the opening (A) in the chisel is to the right. This means that after the first cut is complete, the workpiece should be moved to the right for subsequent cuts. This allows chips to escape freely through the opening in the chisel.
3. Make sure the workpiece is held firmly against the fence when cutting and that the holddown (B) Fig. 28, is properly adjusted. The rate of penetration of the chisel must be fast enough to prevent burning at the tip of the bit, but not too fast as to stall the motor. You may encounter smoke from the bit or material once the chisel has engaged the material. The smoke created is a natural operating occurrence in hollow chisel mortising and is caused by material chip friction and the resins in the stock being burned off. Bluing of the chisel after initial use is not indicative of a dull chisel, but a combination of friction and resin buildup on the cutting faces of the chisel. A dull chisel can be detected by the amount of excess force required to complete a cut.
4. When performing a through mortise, a thin piece of wood should be placed between the workpiece and the table. This prevents "chip-out" at the bottom of the mortise.
5. Fig. 29, illustrates the mortising operation completed.

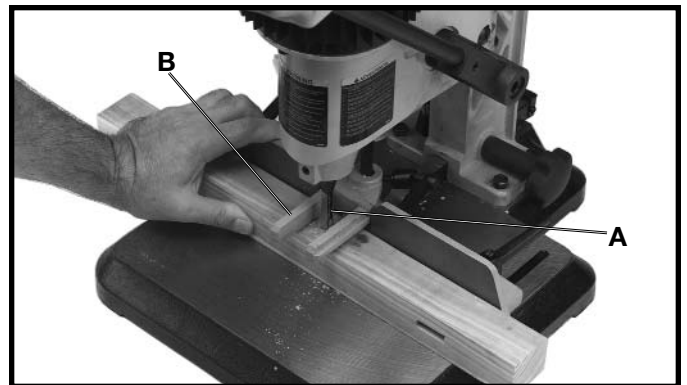


Fig. 28



Fig. 29

ROTATING COLUMN 180 DEGREES

The column (A) Fig. 31, can be rotated 180 degrees, as shown, if it is desired to cut workpieces off the table. To rotate the column, remove four screws, two of which are shown at (B), rotate column (A) 180 degrees and replace the four screws (B).

⚠ WARNING THE BASE MUST BE SECURED TO A SUPPORTING SURFACE.

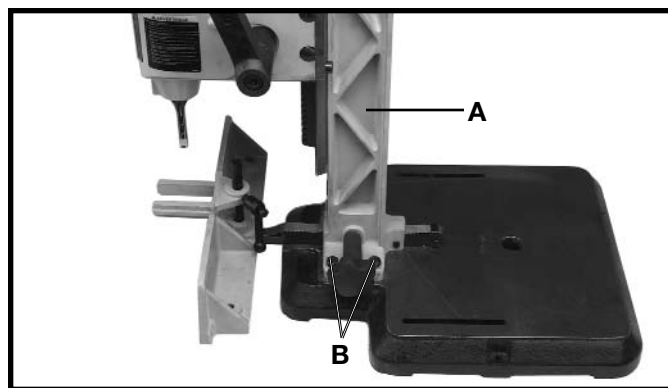


Fig. 31

USING BITS WITH EXTRA LONG SHANKS

When using bits with extra long shanks, it will be necessary to remove the extension (A) Fig. 32. This can be done by inserting screwdriver into center hole of motor end cap (B) Fig. 33, and into slot (E), in end of armature shaft. Then using chuck key, unscrew and remove chuck (C) Fig. 32, and extension (A). Remove extension (A) from chuck (C) and replace chuck (C) on end of motor shaft. The chisel spacer may also be used when using chisels with extra long shanks. Place the chisel spacer (D) Fig. 34 on the chisel shank (F) and insert chisel into chisel holder and tighten chisel holder securely.

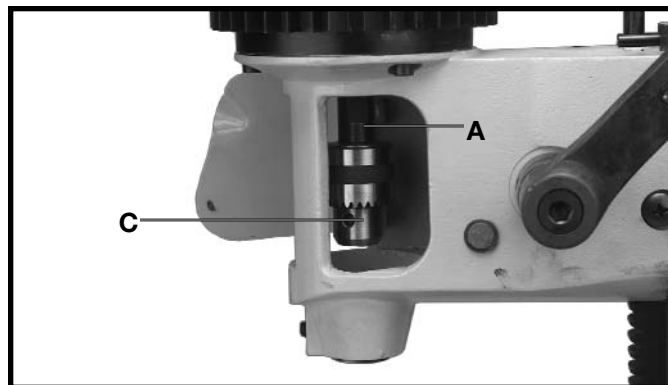


Fig. 32

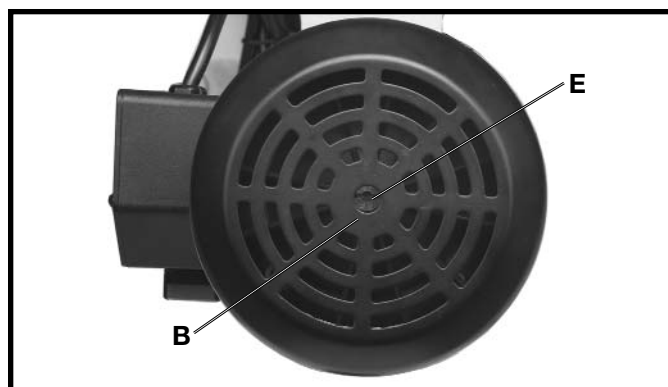


Fig. 33

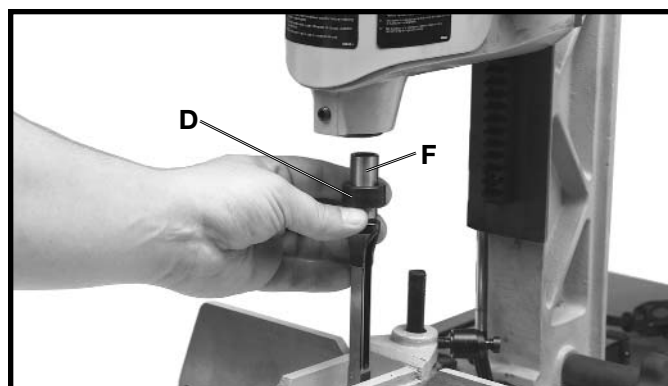


Fig. 34

NOTES

ACCESSORIES

A complete line of accessories is available from your Delta Supplier, Porter-Cable • Delta Factory Service Centers, and Delta Authorized Service Stations. Please visit our Web Site www.deltamachinery.com for a catalog or for the name of your nearest supplier.

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